



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,054	10/21/2004	Antti Tarkiainen	66411-092	8413
25269	7590	04/11/2007	EXAMINER	
DYKEMA GOSSETT PLLC			LE, JOHN H	
FRANKLIN SQUARE, THIRD FLOOR WEST			ART UNIT	PAPER NUMBER
1300 I STREET, NW			2863	
WASHINGTON, DC 20005				
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/11/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/512,054	TARKAINEN, ANTTI	
	<b>Examiner</b>	<b>Art Unit</b>	
	John H. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 17 January 2007.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 13-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 13-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 17 January 2007 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

***Response to Amendment***

1. This office action is in response to applicant's amendment received on 01/17/2007.

Claims 13-19 have been added.

Claims 1-12 have been cancelled.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 13-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be tangible result claimed.

Regarding claims 13-18, merely controlling the electrical network based on said determined magnitude of the negative sequence component of the space vector quantity and said determined location of the negative sequence component of the space vector quantity in relation to a positive sequence component would not appear to be sufficient to constitute a tangible result, since the outcome of the controlling the electrical network step has not been used in a disclosed practical application nor made available in such a manner that it's usefulness in a disclosed practical application can

be realized (e.g., in some instances, if it was “conveyed to someone” or “display” or “stored by user”, that would establish a tangible result). Therefore, claim(s) 13-18 appear(s) non-statutory.

Regarding claim 19, merely compensating a voltage unbalance in the electrical network based on said determined magnitude of the negative sequence component of the voltage and said determined location of the negative sequence component of the voltage in relation to a positive sequence component would not appear to be sufficient to constitute a tangible result, since the outcome of the compensating a voltage unbalance in the electrical network step has not been used in a disclosed practical application nor made available in such a manner that it's usefulness in a disclosed practical application can be realized (e.g., in some instances, if it was “conveyed to someone” or “display” or “stored by user”, that would establish a tangible result). Therefore, claim(s) 19 appear(s) non-statutory.

***Response to Arguments***

4. Applicant's arguments filed 01/17/2007 have been fully considered but they are not persuasive.

-Applicant argues that the new independent claims 13 and 19 set forth tangible and concrete results.

Examiner position is that although, the claims appear useful and concrete, there does not appear to be tangible result claimed since the outcome of the controlling the electrical network step (claim 13) has not been used in a disclosed practical application nor made available in such a manner that it's usefulness in a disclosed practical

application can be realized and the outcome of the compensating a voltage unbalance in the electrical network step (claim 19) has not been used in a disclosed practical application nor made available in such a manner that it's usefulness in a disclosed practical application can be realized.

<sup>Av†</sup>  
-Applicant argues that the prior<sup>†</sup> did not teach "determining the length of the space vector of the space vector quantity and its derivative; determining the zeros of said derivative; determining, based on said determined zeros of said derivative, the components of the major and minor semi-axes of the ellipse formed by the space vector" as cited in claims 13 and 19.

Examiner agrees, therefore claims 13-20 are overcome the rejection under Huggett et al. (USP 6,201,715).

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a):

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571 272 2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571 272 2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le  
Patent Examiner-Group 2863  
April 2, 2007

BRYAN BUI  
PRIMARY EXAMINER

